National Institute of Environmental Health Sciences

Heat impact on schoolchildren in Cameroon, Africa: Potential health threat from climate change

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Abstract:

BACKGROUND: Health impacts related to climate change are potentially an increasing problem in Cameroon, especially during hot seasons when there are no means for protective and adaptive actions. OBJECTIVE: To describe environmental conditions in schools and to evaluate the impact of heat on schoolchildren's health during school days in the Cameroon cities of Yaounde and Douala. METHODS: Schoolchildren (N Euro Surveillance (Bulletin Europeen Sur Les Maladies Transmissibles; European Communicable Disease Bulletin) 285) aged 12-16 years from public secondary schools completed a questionnaire about their background, general symptoms, and hot feelings in a cross-sectional study. In Yaounde, 50 schoolchildren were individually interviewed during school days about hourly symptoms (fatigue, headache, and feeling very hot) and performance. Lascar dataloggers were used to measure indoor classroom temperatures and humidity. RESULTS: There was a significant correlation between daily indoor temperature and the percentages of schoolchildren who felt very hot, had fatigue, and headaches in Yaounde. A high proportion of schoolchildren felt very hot (48%), had fatigue (76%), and headaches (38%) in Yaounde. Prevalences (%) were higher among girls than boys for headaches (58 vs 39), feeling 'very hot overall' (37 vs 21), and 'very hot in head' (21 vs 18). Up to 62% were absentminded and 45% had slow writing speed. High indoor temperatures of 32.5 degrees C in Yaounde and 36.6 degrees C in Douala were observed in school. CONCLUSIONS: Headache, fatigue, and feeling very hot associated with high indoor air temperature were observed among schoolchildren in the present study. Longitudinal data in schools are needed to confirm these results. School environmental conditions should be improved in order to enhance learning.

Source: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2998052

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Indoor Environment, Meteorological Factors, Temperature

Temperature: Extreme Heat, Fluctuations

Geographic Feature:

resource focuses on specific type of geography

Ocean/Coastal

Geographic Location: ☑

resource focuses on specific location

Non-United States

Non-United States: Africa

African Region/Country: African Country

Other African Country: Cameroon

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Developmental Effect, Infectious Disease, Injury, Other Health Impact

Developmental Effect: Cognitive/Neurological

Infectious Disease: Vectorborne Disease

Vectorborne Disease: Mosquito-borne Disease

Mosquito-borne Disease: Malaria

Other Health Impact: Heat exhaustion; Dehydration

Mitigation/Adaptation: ☑

mitigation or adaptation strategy is a focus of resource

Adaptation

Population of Concern: A focus of content

Population of Concern: ☑

populations at particular risk or vulnerability to climate change impacts

Children

Other Vulnerable Population: Women

Resource Type: ☑

format or standard characteristic of resource

Research Article

Timescale: ☑

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment: ☑

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

Climate Change and Human Health Literature Portal

A focus of content